

Application Number 09/900,493
Responsive to Office Action mailed January 4, 2005.

AMENDMENTS TO THE SPECIFICATION

Beginning on page 3 and ending on page 4, please replace the last full paragraph with the following amended paragraph:

An SSL session may include multiple secure connections; in addition, parties may have multiple simultaneous sessions. The session state includes the following elements: a session identifier (an arbitrary byte sequence chosen by the server to identify an active or resumable session state); a peer certificate (an X509.v3[X509] certificate of the peer); a compression method; a cipher spec (the bulk data encryption algorithm (such as null, DES, etc.) and a MAC algorithm (such as MD5 or SHA)); a master secret (a 48-byte secret shared between the client and server); an "is resumable" flag (indicating whether the session can be used to initiate new connections). The connection state includes the following elements: server and client random byte sequences that are chosen by the server and client for each connection; server write MAC secret used in MAC operations on data written by the server; client write MAC secret used in MAC operations on data written by the client; a server write key; a client write key; initialization vectors maintained for each key and initialized by the SSL handshake protocol; and sequence numbers maintained by ~~each~~ party for transmitted and received messages for each connection. When a party sends or receives a change cipher spec message, the appropriate sequence number is set to zero.

On page 4, please replace the first full paragraph with the following amended paragraph:

When a number of Web clients are connecting to a particular Web site having a number of servers, each server will be required to handle a number of clients in the secure transaction environment. As a result, the processing overhead that is required by each server to perform to the secure sockets layer encryption and decryption is very high. If this were the only solution to providing secure communications protocols between the client and server, each transactional Web site would be required to provide ~~a~~an large number of servers to handle to the expected traffic.

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Beginning on page 10 and ending on page 11, please replace the last paragraph with the following amended paragraph:

It should be recognized that the system of the present invention may include a hardware device which may comprise a server add-in card, a network coupled device specifically constructed to perform the functions described herein, or a network coupled device having the capability of providing a plurality of functions, such as, for example, routing functions on network communications. In one embodiment, a dedicated device coupled to a network and suitable for performing the operations described herein will include network interface hardware, random access memory and a microprocessor. In an alternative embodiment, a hardware device may include a plurality of processors each with a dedicated memory or sharing a common memory, with one or more of the processors dedicated to one or more specific tasks, such as performing the SSL encryption and decryption needed to implement the present invention. One such device which is optimal for performing the method of the present invention is described in U.S. Patent Number 6,839,808 ~~co-pending patent application serial no. _____ [NEXSI-01020US0~~ entitled MULTI PROCESSOR SYSTEM, inventors _____, filed July 6, 2001.

On page 11, please replace the first full paragraph with the following amended paragraph:

Figure 4 illustrates the typical TCP/IP handshake sequence. The "threeway handshake" is the procedure used to establish a TCP/IP connection. This procedure normally is initiated by one TCP device (in Figure 3, the client) and responded to by another TCP device (in Figure 3, the server). The procedure also works if two TCP simultaneously initiate the procedure.